



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5 CHICAGO REGIONAL LABORATORY
536 SOUTH CLARK STREET
CHICAGO, ILLINOIS 60605

Date: 12/6/2011
Subject: Review of Region 5 Data for Blue Island Phenols
From: Francis Awanya, Group Lead *FAA*
Region 5 Chicago Regional Laboratory
To: RCRA, LCD, US EPA Region 5
77 West Jackson Boulevard
Chicago, IL 60604

The data being transmitted under this cover memo successfully passed CRL's internal data review procedures as documented in our current Quality Management Plan (QMP) and appropriate Standard Operating Procedures (SOPs). Please be aware that CRL does not perform data validation which is based on your data quality objectives. This function must be performed independently of the laboratory generating the data.

Results in this report represent only the samples analyzed.

Please have the U.S. EPA Project Manager/Officer call the CRL Sample Coordinator at (312) 353-0375 for any comments or questions.

Attached are Results for: Blue Island Phenols

Sylvia Griffin

DEC 06 2011
/ /

Data Management Coordinator and Date Received

DEC 06 2011

Date Transmitted: ____/____/____

Analyses included in this report:

Ingnitability by flash point



Environmental Protection Agency Region 5
Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone: (312) 353-8370 Fax: (312) 886-2591

RCRA, LCD, US EPA Region 5
77 West Jackson Boulevard
Chicago IL, 60604

Project: Blue Island Phenols
Project Number: [none]
Project Manager: Mike Beedle

Reported:
Dec-06-11 14:57

ANALYSIS CASE NARRATIVE

Phone (312) 886-3682

Francis A. Awanya

General Information

This revised narrative is for the transmittal of flash point analysis results repeated at higher temperatures. The test was initially performed at a lower temperature resulting in no observed flash. This occurred because of the way 60 deg C and 140 deg F appeared in the standard operating procedure (SOP) used. Changes will be made so that deg F is used exclusively since it is the SOP test equipment temperature unit.

Upon receipt, the original sample was assigned laboratory number 1109008-07. The sample consists of an aqueous phase and oil phase. The aqueous phase was assigned laboratory number 1109008-08 and the oil phase was similarly assigned number 1109008-09. Flash point results are reported for each of the phase. Analysis performed on each phase was completed within the holding time. A flash was observed for the oily phase sample 1109008-09. No flash was observed for aqueous phase sample 1109008-08. Other pertinent information is provided in the final analysis report.

Sample Analysis and Results

The sample phases were analyzed for ignitability by flash point using CRL Standard Operating Procedure (CRL.SOP) AIG048 Revision No: 2.1 (Reference SW846 Method 1020A).

Quality Control

All required quality control criteria for the laboratory, method, and system performance audits were evaluated and determined to be within the CRL's QC limits.

Signature Francis A. Awanya, Date 12/06/2011

FMA 12/06/2011
Francis Awanya, Group Leader



Environmental Protection Agency Region 5
Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

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77 West Jackson Boulevard
Chicago IL, 60604

Project: Blue Island Phenols
Project Number: [none]
Project Manager: Mike Beedle

Reported:
Dec-06-11 14:57

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BIP-7, 9008-07 aqueous phase	1109008-08	Water	Sep-13-11 11:17	Sep-13-11 15:11
BIP-7, 9008-07 oil phase	1109008-09	Soil	Sep-13-11 11:17	Sep-13-11 15:11

Ignitability, Flash Point, EPA 1020A (modified)

US EPA Region 5 Chicago Regional Laboratory

BIP-7, 9008-07 aqueous phase (1109008-08) Water Sampled: Sep-13-11 11:17 Received: Sep-13-11 15:11

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Ignitability by Flashpoint	U	NF	1.00	1.00	Degrees F	1	B110023	Oct-27-11	Nov-03-11

BIP-7, 9008-07 oil phase (1109008-09) Soil Sampled: Sep-13-11 11:17 Received: Sep-13-11 15:11

Analyte	Result	Flags / Qualifiers	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed
Ignitability by Flashpoint	131		1.00	1.00	Degrees F	1	B110023	Oct-27-11	Nov-03-11

FAW 12/06/2011
Francis Awanya, Group Leader



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Project: Blue Island Phenols
Project Number: [none]
Project Manager: Mike Beedle

Reported:
Dec-06-11 14:57

Notes and Definitions

NF No Flash
U Not Detected
NR Not Reported

Items for Project Manager Review

LabNumber	Analysis	Analyte	Exception
			Default Report (not modified)
			VERSION 6.08:2014
	Ignitability by flash point	(Water)	J-Flags used
	Ignitability by flash point	(Water)	Result calculations based on MDL
	Ignitability by flash point	(Water)	Special Units: (Degrees F)
1109008-08	Ignitability by flash point	Ignitability by Flashpoint	NF: No Flash
1109008-09	Ignitability by flash point		Soil batched as Water
B110023-DUP1	Ignitability by flash point	Ignitability by Flashpoint	NF: No Flash

FAA 12/06/2011

Sample, Log and Extraction Comments

FAA 12/06/2011



Environmental Protection Agency Region 5
Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

WORK ORDER

Printed: 12/6/2011 3:29:33PM

1109008

US EPA Region 5 Chicago Regional Laboratory

Client: RCRA, LCD, US EPA Region 5
Project: Blue Island Phenols

Project Manager: Angela Ockrassa
Project Number: [none]

Report To:

Mike Beedle
RCRA, LCD, US EPA Region 5

77 West Jackson Boulevard
Chicago, IL 60604

Phone: 3-7922
Fax: (312)353-4342

Date Due: Oct-29-11 15:00 (45 day TAT)

Received By: Robert Snyder

Date Received: Sep-13-11 15:11

Logged In By: Robert Snyder

Date Logged In: Sep-14-11 09:06

Samples Received at: 15.2°C
Sample tags/labels Yes
Seals Intact Yes
Received on ice Yes
Paperwork Included Yes

Analysis	Due	TAT	Expires	Comments
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1109008-01 BIP-1 [Water] Sampled Sep-13-11 09:15 Central

TCLP/ZHE VOLATILES	Oct-29-11 12:00	45	Sep-27-11 09:15	pH = 8, report non-TCLP analytes
Metals, TCLP ICP (w/o Hg)	Oct-29-11 12:00	45	Mar-11-12 09:15	pH = 8, run only if total metals is high
TCLP/ZHE Extraction	Oct-29-11 12:00	45	Sep-27-11 09:15	pH = 8
TCLP - SVOA by end-over-end rotator	Oct-29-11 12:00	45	Sep-20-11 09:15	pH = 8, report non-TCLP analytes
Metals full ICP (W)	Oct-29-11 12:00	45	Mar-11-12 09:15	pH = 8
TCLP Extraction	Oct-29-11 12:00	45	Sep-27-11 09:15	pH = 8
Hardness by calc	Oct-29-11 12:00	45	Mar-11-12 09:15	pH = 8

1109008-02 BIP-2 [Water] Sampled Sep-13-11 09:21 Central

TCLP - SVOA by end-over-end rotator	Oct-29-11 12:00	45	Sep-20-11 09:21	pH = 8, report non-TCLP analytes
TCLP Extraction	Oct-29-11 12:00	45	Sep-27-11 09:21	pH = 8
Hardness by calc	Oct-29-11 12:00	45	Mar-11-12 09:21	pH = 8
TCLP/ZHE VOLATILES	Oct-29-11 12:00	45	Sep-27-11 09:21	pH = 8, report non-TCLP analytes
Metals, TCLP ICP (w/o Hg)	Oct-29-11 12:00	45	Mar-11-12 09:21	pH = 8, run only if total metals is high
Metals full ICP (W)	Oct-29-11 12:00	45	Mar-11-12 09:21	pH = 8
TCLP/ZHE Extraction	Oct-29-11 12:00	45	Sep-27-11 09:21	pH = 8

WORK ORDER

Printed: 12/6/2011 3:29:33PM

1109008

US EPA Region 5 Chicago Regional Laboratory

Client: RCRA, LCD, US EPA Region 5
Project: Blue Island Phenols

Project Manager: Angela Ockrassa
Project Number: [none]

Analysis	Due	TAT	Expires	Comments
1109008-03 BIP-3 [Water] Sampled Sep-13-11 09:29 Central				
TCLP Extraction	Oct-29-11 12:00	45	Sep-27-11 09:29	pH = 8
Metals, TCLP ICP (w/o Hg)	Oct-29-11 12:00	45	Mar-11-12 09:29	pH = 8, run only if total metals is high
Metals full ICP (W)	Oct-29-11 12:00	45	Mar-11-12 09:29	pH = 8
TCLP/ZHE VOLATILES	Oct-29-11 12:00	45	Sep-27-11 09:29	pH = 8, report non-TCLP analytes
TCLP - SVOA by end-over-end rotator	Oct-29-11 12:00	45	Sep-20-11 09:29	pH = 8, report non-TCLP analytes
TCLP/ZHE Extraction	Oct-29-11 12:00	45	Sep-27-11 09:29	pH = 8
Hardness by calc	Oct-29-11 12:00	45	Mar-11-12 09:29	pH = 8
1109008-04 BIP-4 [Water] Sampled Sep-13-11 10:07 Central				
TCLP Extraction	Oct-29-11 12:00	45	Sep-27-11 10:07	pH = 8
TCLP/ZHE VOLATILES	Oct-29-11 12:00	45	Sep-27-11 10:07	pH = 8, report non-TCLP analytes
TCLP - SVOA by end-over-end rotator	Oct-29-11 12:00	45	Sep-20-11 10:07	pH = 8, report non-TCLP analytes
Metals, TCLP ICP (w/o Hg)	Oct-29-11 12:00	45	Mar-11-12 10:07	pH = 8, run only if total metals is high
Metals full ICP (W)	Oct-29-11 12:00	45	Mar-11-12 10:07	pH = 8
TCLP/ZHE Extraction	Oct-29-11 12:00	45	Sep-27-11 10:07	pH = 8,
1109008-05 BIP-5 [Water] Sampled Sep-13-11 10:18 Central				
Metals full ICP (W)	Oct-29-11 12:00	45	Mar-11-12 10:18	pH = 8
TCLP/ZHE VOLATILES	Oct-29-11 12:00	45	Sep-27-11 10:18	pH = 8, report non-TCLP analytes
TCLP Extraction	Oct-29-11 12:00	45	Sep-27-11 10:18	pH = 8
Metals, TCLP ICP (w/o Hg)	Oct-29-11 12:00	45	Mar-11-12 10:18	pH = 8, run only if total metals is high
TCLP - SVOA by end-over-end rotator	Oct-29-11 12:00	45	Sep-20-11 10:18	pH = 8, report non-TCLP analytes
TCLP/ZHE Extraction	Oct-29-11 12:00	45	Sep-27-11 10:18	pH = 8
1109008-06 BIP-6 [Soil] Sampled Sep-13-11 10:28 Central				
SVOA Expanded List	Oct-29-11 12:00	45	Sep-27-11 10:28	pH = 8
Total % Dry Solids 105C	Sep-23-11 12:00	10	Sep-20-11 10:28	
1109008-07 BIP-7 [Water] Sampled Sep-13-11 11:17 Central				
TCLP Extraction	Oct-29-11 12:00	45	Sep-27-11 11:17	
Metals, TCLP ICP (w/o Hg)	Oct-29-11 12:00	45	Mar-11-12 11:17	run only if total metals is high
Ignitability by flash point	Oct-29-11 12:00	45	Sep-12-12 11:17	
TCLP/ZHE Extraction	Oct-29-11 12:00	45	Sep-27-11 11:17	
TCLP/ZHE VOLATILES	Oct-29-11 12:00	45	Sep-27-11 11:17	report non-TCLP analytes
Metals full ICP (W)	Oct-29-11 12:00	45	Mar-11-12 11:17	
TCLP - SVOA by end-over-end rotator	Oct-29-11 12:00	45	Sep-20-11 11:17	report non-TCLP analytes

WORK ORDER

Printed: 12/6/2011 3:29:33PM

1109008

US EPA Region 5 Chicago Regional Laboratory

Client: RCRA, LCD, US EPA Region 5
Project: Blue Island Phenols

Project Manager: Angela Ockrassa
Project Number: [none]

Analysis	Due	TAT	Expires	Comments
1109008-08 BIP-7, 9008-07 aqueous phase [Water] Sampled Sep-13-11 11:17 Central				
TCLP/ZHE Extraction	Oct-29-11 12:00	45	Sep-27-11 11:17	
TCLP - SVOA by end-over-end rotator	Oct-29-11 12:00	45	Sep-20-11 11:17	report non-TCLP analytes
Metals full ICP (W)	Oct-29-11 12:00	45	Mar-11-12 11:17	
TCLP Extraction	Oct-29-11 12:00	45	Sep-27-11 11:17	
Ingnitability by flash point	Oct-29-11 12:00	45	Sep-12-12 11:17	
Metals, TCLP ICP (w/o Hg)	Oct-29-11 12:00	45	Mar-11-12 11:17	run only if total metals is high
TCLP/ZHE VOLATILES	Oct-29-11 12:00	45	Sep-27-11 11:17	
1109008-09 BIP-7, 9008-07 oil phase [Soil] Sampled Sep-13-11 11:17 Central				
TCLP/ZHE VOLATILES	Oct-29-11 12:00	45	Sep-27-11 11:17	
Metals full ICP (S)	Oct-29-11 12:00	45	Mar-11-12 11:17	
TCLP Extraction	Oct-29-11 12:00	45	Sep-27-11 11:17	
TCLP - SVOA by end-over-end rotator	Oct-29-11 12:00	45	Sep-27-11 11:17	
Metals, TCLP ICP (w/o Hg)	Oct-29-11 12:00	45	Mar-11-12 11:17	run only if total metals is high
Total % Dry Solids 105C	Oct-29-11 12:00	45	Sep-20-11 11:17	
Ingnitability by flash point	Oct-29-11 12:00	45	Sep-12-12 11:17	

Analysis groups included in this work order

Hardness by calc

Mg ICP (W) Ca ICP (W)

Analytical and Inorganic Group Data Review Checklist

Work order #: 1109008 Project: Blue Island Phenols
Analysis: Ignitability by flash point CRL SOP: AIG048 Revision No: 2.1

Analyst		CHECK LIST	Reviewer	
YES	NO	Package Overview	YES	NO
√		Raw Data Package Complete?	X	
√		Results Reported Correctly?	X	
√		Special Requests Done?	X	
√		Calculations Checked?	X	
NA	NA	Calibration not Exceeded?	NA	NA
NA	NA	Field QC Checked?	NA	NA
Quality Control				
√		Holding Time Met?	X	
√		Preservation Correct?	X	
√		Initial Instrument Performance Checks Verified?	X	
√		Calibration Verification Checked?	X	
√		Matrix QC Checked?	X	
√		QCS Checked (If Applicable)?	X	
Final Check				
√		Technical Review Done?	X	
√		Narrative Complete?	X	
Electronic Pathway: Not Applicable				

All concerns with this data package documented (by the reviewer) have been resolved to the satisfaction of the reviewer. The reviewer, by signing, verifies that this package is complete and supports the reported results in accordance with the CRL Quality Management Plan and applicable standard operating procedures (SOPs).

Analyst: FAA Data Reviewer: E.S.
Date: 11/29/2011 Date: 12/1/2011

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406 43

Analysis: Ignitability by Flash Point
Analyst: Francis A. Awanya

Project: Blue Island Phenols
Work Order# 1109008 **Date:** 11/29/2011

ANALYSIS CASE NARRATIVE

Phone (312)886-3682

OK/RF
12-5-2011

General Information

This revised narrative is for the transmittal of flash point analysis results repeated at higher temperatures. The test was initially performed at a lower temperature resulting in no observed flash. This occurred because of the way 60 deg C and 140 deg F appeared in the standard operating procedure (SOP) used. Changes will be made so that deg F is used exclusively since it is the SOP test equipment temperature unit.

One water sample, collected for the Project, and received at the Chicago Regional Laboratory on 09/13/2011. Upon receipt, the original sample was assigned laboratory number 1109008-07. The sample consists of an aqueous phase and oil phase. The aqueous phase was assigned laboratory number 1109008-08 and the oil phase was similarly assigned number 1109008-09. Flash point results are reported for each of the phase. Analysis performed on each phase was completed within the holding time. A flash was observed for the oily phase sample 1109008-09. No flash was observed for aqueous phase sample 1109008-08. Other pertinent information is provided in the final analysis report.

Sample Analysis and Results

The sample phases were analyzed for ignitability by flash point using CRL Standard Operating Procedure (CRL.SOP) AIG048 Revision No: 2.1 (Reference SW846 Method 1020A).

Quality Control

All required quality control criteria for the laboratory, method, and system performance audits were evaluated and determined to be within the CRL's QC limits.

Signature _____, Date _____

PREPARATION BENCH SHEET

B110023

US EPA Region 5 Chicago Regional Laboratory

Printed: 11/3/2011 1:01:38PM

Matrix: Water

Prepared using: A&I - General Preparation

(No Surrogate)

Lab Number	Analysis	Prepared	Initial (mL)	Final (mL)	Spike ID	Source ID	ul Spike	ul Surrogate	Client	Extraction Comments
1109008-08	Ignitability by flash po	Oct-27-11 00:00	2	2					RA, LCD, US EPA Regio	
1109008-09	Ignitability by flash po	Oct-27-11 00:00	2	2					RA, LCD, US EPA Regio	
B110023-DUP1	QC	Oct-27-11 00:00	2	2		1109008-08				
B110023-DUP2	QC	Oct-27-11 00:00	2	2		1109008-09				
B110023-SRM1	QC	Oct-27-11 00:00	2	2	9010702					
B110023-SRM2	QC	Oct-27-11 00:00	2	2	9010702					

Spiking Witnessed By

Date

Preparation Reviewed By

Date

Extracts Received By

Date

Flash Point Calculations

Version 2
Reviewed & Locked by AO on 07/27/11
To use template for calculations, copy sheet and paste to a another, blank Excel sheet

Date of Analysis: 11/03/2011
Analyst: FA

Rename copied sheet and enter temperatures for calculations

Batch ID: B110023

Count	CRL Sample I.D Number	Flash Point Temperature Found (Deg. F)	Standard Barometric Pressure (SBP) (mm Hg)	Barometric Pressure Recorded(BPR) (mm Hg)	Barometric Pressure Differences (BPD) (mm Hg)	BP Corrected Flash Point Temperature (Deg. F)
1	LIMS# 9010702	79	760	746	14	79.8
2	LIMS# 9010702	79	760	745	15	79.9
	LIMS# 9010702					
3	1109008-09	130	760	745	15	130.9
4	B110023-DUP2	130	760	745	15	130.9
					Mean =	79.9

Work Order: 1109008
 Bench Sheet: B110023

Date: 11/03/2011Analyst: FAASample ID: **SRM, LIMS #** 9010702Sample ID: **SRM, LIMS #** 9010702

Temperature (°F)	Flash (Y/N)	Pressure (mmHg)
65	N	—
70	N	—
75	N	—
76	N	—
77	N	—
78	N	—
79	Y	746
80	Y	—
81	Y	—
85	Y	—
—	—	—
—	—	—
—	—	—
—	—	—
—	—	—

Temperature (°F)	Flash (Y/N)	Pressure (mmHg)
75	N	—
77	N	—
78	N	—
79	Y	745
84	Y	—
—	—	—
—	—	—
—	—	—
—	—	—
—	—	—
—	—	—
—	—	—
—	—	—
—	—	—
—	—	—

Sample ID: 1109008-09
 Preliminary -

Temperature (°F)	Flash (Y/N)	Pressure (mmHg)
132	Y	—
99	N	—
109	N	—
116	N	—
119	N	—
122	N	—
126	N	—
128	N	—
129	Y	745
—	—	—
—	—	—
—	—	—
—	—	—
—	—	—
—	—	—
—	—	—
—	—	—

Sample ID: 1109008-09
 Finite Flash Point -

Temperature (°F)	Flash (Y/N)	Pressure (mmHg)
125	N	—
126	N	—
127	N	—
128	N	—
129	Y	745
130	Y	—
131	Y	—
—	—	—
—	—	—
—	—	—
—	—	—
—	—	—
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—	—	—
—	—	—
—	—	—

"—" Designate spaces not used.

Continuation from previous page

Analyst: **FAA**

Priliminary -

[illegible]

Finite Flash Point -

[illegible]

Priliminary -

[illegible]

Finite Flash Point -

[illegible]

" - " Designate space not used.

Flashpoint by AIG048

Continuation from previous page

Date: 11/03/2011

Analyst: FAA

Sample ID: _____

Priliminary -

[illegible]

Sample ID: B110023-Dupi

Finite Flash Point -

[illegible]

Sample ID: 1

Priliminary -

[illegible]

Sample ID: 1

Finite Flash Point -

[illegible]

" - " Denotesspace not used.

Flashpoint by AIG048

Date: _____

Analyst:

Sample ID: _____

Preliminary

[illegible]

Sample ID: _____

Finite Flash Point -

[illegible]

Sample ID: _____

Priliminary -

[illegible]

Sample ID: _____

Finite Flash Point -

[illegible]